

## CLAIMS:

What is claimed is:

- 1 1. A method of encrypting data packets, comprising:  
2 selecting a byte within a source data packet;  
3 randomly selecting an available position within an  
4 encrypted data packet in which to place an encrypted byte  
5 corresponding to said selected byte of said source data  
6 packet;  
7 encrypting said selected byte using a random number to  
8 generate said encrypted byte; and  
9 placing said encrypted byte in said selected position  
10 within said encrypted data packet, wherein said selected byte  
11 of said source data packet is encrypted in an unconditionally  
12 secure manner.
- 1 2. The method of claim 1, further comprising:  
2 repeating said steps of selecting a byte, randomly  
3 selecting an available position, encrypting said selected  
4 byte, and placing said encrypted byte in said selected  
5 position for each byte within said source data packet.
- 1 3. The method of claim 2, further comprising:  
2 after encrypting all bytes of said source data packet,  
3 filling remaining positions within said encrypted data packet  
4 with random numbers.
- 1 4. The method of claim 2, further comprising:  
2 after encrypting all bytes of said source data packet,  
3 encrypting authentication data; and  
4 placing bytes of said encrypted authentication data in  
5 remaining positions within said encrypted data packet.

1 5. A one-time pad, comprising:  
2 a memory device;  
3 a nonrepeating, randomly ordered sequence of N numbers  
4 within the range of 1 to N within the memory device; and  
5 a plurality of arrays of random numbers within said  
6 memory device, each array within said plurality of arrays  
7 associated with a number within said sequence of numbers.

1 6. The one-time pad of claim 5, wherein each array within  
2 the plurality of arrays comprises a character map.

1 7. The one-time pad of claim 5, wherein said sequence and  
2 said plurality of arrays comprise a sheet.

1 8. The one-time pad of claim 5, further comprising:  
2 a counter within said memory device, said counter  
3 pointing to a sheet within a plurality of sheets within said  
4 one-time pad.

1 9. An electronic checkbook, comprising:  
2 a memory containing a plurality of encryption sheets,  
3 each encryption sheet within the plurality of encryption  
4 sheets including:

5 a string of N numbers within the range of 1 to N  
6 arranged in a nonrepeating, randomly ordered sequence;  
7 and

8 a plurality of random number arrays, each array  
9 within said plurality of arrays associated with a  
10 different number within said string of numbers; and  
11 a plurality of identifiers associating each encryption  
12 sheet within the plurality of encryption sheets with an  
13 electronic check.

1 10. The electronic checkbook of claim 9, wherein each  
2 encryption sheet and said associated identifier comprises an  
3 unused electronic check.

1 11. The electronic checkbook of claim 9, wherein said  
2 electronic check comprises information encrypted using an  
3 encryption sheet within said plurality of encryption sheets.

1 12. The electronic checkbook of claim 11, wherein said  
2 electronic check further comprises:

3 a plurality of encrypted bytes generated from a plurality  
4 of source bytes,

5 wherein each encrypted byte is placed in a position  
6 within said plurality of encrypted bytes identified by a  
7 position number located within said string at a location  
8 corresponding to a location within said plurality of source  
9 bytes containing a source byte utilized to generate said  
10 encrypted byte, and

11 wherein each encrypted byte comprises a random number  
12 corresponding, within an array associated with said position  
13 number, to said source byte.

1 13. The electronic checkbook of claim 12, wherein said  
2 electronic check further comprises:

3 authentication data encrypted with said plurality of  
4 encrypted bytes.

1 14. The electronic checkbook of claim 9, wherein said  
2 electronic checkbook further comprises:

3 ~~a port for connection to a receiving device.~~

1 15. A method of processing an electronic check, comprising:  
2  
3

2 receiving an electronic check encrypted using a one-time  
3 pad at a business;

4 transmitting a first copy of said electronic check to a  
5 payor's bank and a second copy of said electronic check to a  
6 payee's bank; and

7 decoding said first copy of said electronic check at said  
8 payor's bank using a copy of said one-time pad.

1 16. The method of claim 15, further comprising:

2 authenticating said electronic check; and

3 transmitting said first copy of said electronic check to  
4 a clearinghouse with a payment authorization.

1 17. The method of claim 16, further comprising:

2 transmitting said second copy of said electronic check to  
3 said clearinghouse;

4 comparing said first copy of said electronic check to  
5 said second copy of said electronic check; and

6 responsive to determining that said first copy of said  
7 electronic check matches said second copy of said electronic  
8 check, processing a transaction transferring funds from said  
9 payor's bank to said payee's bank.

1 18. A method of securing transmission of a global transponder  
2 location, comprising:

3 receiving a request packet via a cellular communications  
4 link to said global transponder;

5 encrypting a data packet containing a latitude and a  
6 longitude for a location of said global transponder using a  
7 one-time pad containing within said global transponder; and

8 transmitting said encrypted data packet to a central  
9 computer over said cellular communications link.

1 19. The method of claim 18, wherein said step of encrypting  
2 a data packet further comprises:

3 locating an identifier within said request packet;

4 comparing said identifier to a plurality of identifiers  
5 in said global transponder, wherein identifier within said  
6 plurality of identifiers is associated with a sheet within  
7 said one-time pad;

8 responsive to determining that said identifier within  
9 said request packet does not match any identifier within said  
10 plurality of identifiers, terminating said cellular  
11 communications link; and

12 responsive to determining that said identifier within  
13 said request packet matches an identifier within said  
14 plurality of identifiers, encrypting said data packet using a  
15 sheet within said one-time pad associated with said matching  
16 identifier.

1 20. A global transponder, comprising:

2 a processor connected to a memory containing a one-time  
3 pad;

4 a cellular modem connected to said processor and an  
5 antenna;

6 a GPS chip set connected to said processor and said  
7 antenna, said GPS chip set providing GPS fix data to said  
8 processor,

9 wherein said processor, responsive to receiving a call  
10 through said cellular modem, encrypts said GPS fix data using  
11 said one-time pad for transmission via said cellular modem.

1 21. A method of encrypting data packets using a one-time pad,  
2 comprising:

3 selecting a character within a source data packet;

4 reading a position number within a randomly ordered,  
5 nonrepeating sequence of N numbers within the range of 1 to N,  
6 wherein said position number is at a location within said  
7 sequence corresponding to a location of said selected  
8 character within said source data packet;

9 reading a random number within a nonrepeating array of  
10 random numbers associated with said position number, wherein  
11 said random number corresponds within said array to said  
12 selected character; and

13 placing said random number in a position within an  
14 encrypted data packet corresponding to said position number.

22. The method of claim 21, further comprising:

repeating said steps of selecting a character, reading a  
position number, reading a random number corresponding to said  
selected character, and placing said random number in a  
position corresponding to said position number for each  
character within said source data packet to encrypt said  
source data packet.

23. The method of claim 22, further comprising:

after encrypting said source data packet, encrypting an  
authentication code; and

placing the encrypted authentication code within said  
encrypted data packet.

24. The method of claim 22, further comprising:

after encrypting said source data packet, encrypting a  
stop code; and

placing the encrypted stop code within said encrypted  
data packet.

1 25. A method of decoding data packets encrypted using a one-  
2 time pad, comprising:

3 reading a position number within a randomly ordered,  
4 nonrepeating sequence of N numbers within the range of 1 to N;

5 reading a random number located within an encrypted data  
6 packet at a position corresponding to said position number;

7 determining a character corresponding to said random  
8 number within a nonrepeating array of random numbers  
9 associated with said position number; and

10 placing said character in a next available position  
11 within a decoded data packet.

1 26. The method of claim 25, further comprising:

2 repeating said steps of reading a position number,  
3 reading a random number, determining a character corresponding  
4 to said random number, and placing said character in a next  
5 available position for each character in said decoded data  
6 packet.

1 27. The method of claim 26, further comprising:

2 detecting a stop code encrypted in said encrypted data  
3 packet.

1 28. The method of claim 26, further comprising:

2 decoding an authentication code encrypted in said  
3 encrypted data packet.

1 29. A computer program product for use with a data processing  
2 system, comprising:

3 a computer usable medium;

4 first instructions on said computer usable medium for  
5 selecting a character within a source data packet;

second instructions on said computer usable medium for reading a position number within a randomly ordered, nonrepeating sequence of N numbers within the range of 1 to N, wherein said position number is at a location within said sequence corresponding to a location of said selected character within said source data packet;

third instructions on said computer usable medium for reading a random number within a nonrepeating array of random numbers associated with said position number, wherein said random number corresponds within said array to said selected character; and

fourth instructions on said computer usable medium for placing said random number in a position within an encrypted data packet corresponding to said position number.

30. A computer program product for use with a data processing system, comprising:

a computer usable medium;

first instructions on said computer usable medium for reading a position number within a randomly ordered, nonrepeating sequence of N numbers within the range of 1 to N;

second instructions on said computer usable medium for reading a random number located within an encrypted data packet at a position corresponding to said position number;

third instructions on said computer usable medium for determining a character corresponding to said random number within a nonrepeating array of random numbers associated with said position number; and

fourth instructions on said computer usable medium for placing said character in a next available position within a decoded data packet.